

REPORT ON MACHINERY.

No. 10727

THU JUN 24 1920

Received at London Office

MIDDLESBRO

14.6.20 When handed in at Local Office 23.6.20 Port of

Stockton-on-Tees

Date, First Survey 13th June 1920

Last Survey 17th June 1920

Steel screw steamer EVROS

(S.S. No 194)

Tonnage

Built at Stockton

By whom built Messrs Craig Taylor & Co

When built

Stockton

By whom made Messrs Blair & Co Ltd (No 1854)

when made 1920

Stockton

By whom made Messrs Blair & Co Ltd

when made 1920

Owners

Port belonging to

Power as per Section 28

386

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

ES, &c.—Description of Engines

Tri-compound

No. of Cylinders

3

No. of Cranks

3

Cylinders 26-42-70 Length of Stroke 48

Revs. per minute

64

Dia. of Screw shaft

as per rule 14.48 Material of W. Iron

Screw shaft fitted with a continuous liner the whole length of the stern tube

yes

Is the after end of the liner made water tight

propeller boss yes If the liner is in more than one length are the joints burned in

yes If the liner does not fit tightly at the part

the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

light-fit

fitted, is the shaft lapped or protected between the liners

yes

Length of stern bush

5'-4"

as per rule 12.98 Dia. of Crank shaft journals

as per rule 13.62

as per rule 14.5

Dia. of Crank pin

14.3 Size of Crank webs 28.5 x 9.5

as fitted 13.74 Dia. of screw

17-6

Pitch of Screw

17-6

No. of Blades

4

State whether moveable

no

Total surface

98 sq

Feed pumps

2

Diameter of ditto

3.5

Stroke

34

Can one be overhauled while the other is at work

yes

Donkey pumps

2

Diameter of ditto

5

Stroke

34

Can one be overhauled while the other is at work

yes

Engines

3

Sizes of Pumps

13 x 24

10.5 x 8 + 21

5 x 8

No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 3 @ 3.5" + 2 @ 3.5" in well

In Holds, &c. 1 & 3 holds 2 @ 3.5" 2 & 4 holds 2 @ 4"

hold 3 @ 3.5" Tunnel well one at 3.5"

bilge Injections 1 sizes 6.75 Connected to circulating pump

yes

Is a separate Donkey Suction fitted in Engine room & size

yes - 4"

bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible

yes

Are the sluices on Engine room bulkheads always accessible

no

connections with the sea direct on the skin of the ship

yes

Are they Valves or Cocks

both

fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

yes

Are the Discharge Pipes above or below the deep water line

above

each fitted with a Discharge Valve always accessible on the plating of the vessel

yes

Are the Blow Off Cocks fitted with a spigot and brass covering plate

yes

pipes are carried through the bunkers

suctions to forward holds

How are they protected

wood ceiling

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

yes

Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

yes

examination of completion of fitting of Sea Connections

22.3.20

of Stern Tube

27.4.20

Screw shaft and Propeller

30.4.20

Screw Shaft Tunnel watertight sea hull Rfd Is it fitted with a watertight door

yes

worked from top platform

RS, &c.—(Letter for record (r))

Manufacturers of Steel

Messrs John Spencer & Son Ltd

S.S.B.

Heating Surface of Boilers

6194

Is Forced Draft fitted

no

No. and Description of Boilers

3 single ended

g Pressure

180

Tested by hydraulic pressure to

360

Date of test

19.12.19

No. of Certificate

6068

each boiler be worked separately

yes

Area of fire grate in each boiler

63.3 sq

No. and Description of Safety Valves to

2 direct spring

Area of each valve

8.29

Pressure to which they are adjusted

185

Are they fitted with easing gear

yes

distance between boilers and bunkers

11'-0"

Mean dia. of boilers

15'-0"

Length

11'-0"

Material of shell plates

steel

Range of tensile strength

28-32

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

2 R. lap

213-3 Riv Diameter of rivet holes in long. seams

1.4

Pitch of rivets

8.5

Lap of plates or width of butt straps

18.5 + 1.75

5 Rivs per pitch

Working pressure of shell by rules

184

Size of manhole in shell

16" x 12"

Material steel Outside diameter

45.5

compensating ring

7.5 x 1.5

No. and Description of Furnaces in each boiler

3 Brighton

Material steel

Outside diameter

45.5

of plain part

top

bottom

Thickness of plates

9/16

Description of longitudinal joint

Weld

No. of strengthening rings

3

g pressure of furnace by the rules

192

Combustion chamber plates: Material

steel

Thickness: Sides

4/16

Back

4/16

Top

4/16

Bottom

4/16

stays to ditto: Sides

8.5 x 10

Back

9.5 x 9

Top

10 x 8.5

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

184

all of stays IRON

Diameter at smallest part

2.31

Area supported by each stay

87.75

Working pressure by rules

197

End plates in steam space

steel

Thickness

1.4

Pitch of stays

20

How are stays secured

nuts

Working pressure by rules

199

Material of stays

steel

at smallest part

7.24

Area supported by each stay

356

Working pressure by rules

211

Material of Front plates at bottom

steel

Material of Lower back plate

steel

Thickness

1

Greatest pitch of stays

14 x 9

Working pressure of plate by rules

250

Mean pitch of stays

11.5

of tubes

3.5

Pitch of tubes

4.5 x 4.5

Material of tube plates

steel

Thickness: Front

1.5

Back

1.5

Mean pitch of stays

11.5

across wide water spaces

14.5

Working pressures by rules

192

Girders to Chamber tops: Material

steel

Depth and

Number and pitch of stays in each

2 @ 8.5

ss. of girder at centre

7.5 x 1.5

Length as per rule

29

Distance apart

10

Can the superheater be shut off and the boiler worked

none

ng pressure by rules

185

Superheater or Steam chest; how connected to boiler

IS A DONKEY BOILER FITTED? no

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:— Two each of connecting rod, top end, bottom end and main bearing bolts and nuts: One set of coupling bolts and nuts: One set each of feed, bridge and air pump valves: One set each of H.P. & M.P. piston and bottom rings; assorted bolts and nuts; iron of various sizes; one tail end shaft and minor gear

The foregoing is a correct description.

Geo. Thompson

Manufacturer

1919.

Dates of Survey while building	During progress of work in shops --	During erection on board vessel --	Total No. of visits
	June 12-16-20-22, July 3-8-10-16-22-31, Aug 5-11-14-15-25-26-28-29, Sep 1-2-5-8-14-15-16-17-18-19-22-25-26-29, Oct 1-2-6-8	10-13-14-17-20-25-26-27-30-31, Nov 2-6-10-12-14-15-20-24-26-28, Dec 2-4-5-8-10-11-15-18-19-22-24, Jan 19-29, Feb 9-10	16-18-20-24-27, Mar 9-16-19-22, Apr 27-30, May 3-6-7-10-12-20, June 4-7-10-11-14-17
	95		Is the approved plan of main boiler forwarded herewith. <i>yes</i>

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 12. 9. 19 Slides 12. 9. 19 Covers 4. 9. 19 Pistons 4. 9. 19 Rods 4. 9. 19
Connecting rods 10. 10. 19 Crank shaft 4. 9. 19 Thrust shaft 16. 7. 19 Tunnel shafts to 10. 2. 20 Screw shafts 9. 3. 20 Propeller 9. 3. 20
Stern tube 19. 3. 20 Steam pipes tested 10. 5. 20 Engine and boiler seatings 22. 3. 20 Engines holding down bolts 13. 5. 20
Completion of pumping arrangements 14. 6. 20 Boilers fixed 1. 6. 20 Engines tried under steam 1. 6. 20
Main boiler safety valves adjusted 1. 6. 20 Thickness of adjusting washers $PR\ S - \frac{3}{16}$; $C-B\ S - \frac{3}{16}$; $S-B\ S - \frac{3}{16}$
Material of Crank shaft *Ing Steel* Identification Mark on Do. 7207 Material of Thrust shaft *Ing Steel* Identification Mark on Do. 4467-N
Material of Tunnel shafts *Ing Steel* Identification Marks on Do. 4467-N Material of Screw shafts *Iron* Identification Marks on Do. 7207
Material of Steam Pipes *Solid drawn Copper* ($4\frac{1}{2} \times \frac{1}{4}$) Test pressure 400 lbs.

Is an installation fitted for burning oil fuel. yes Is the flash point of the oil to be used over 150°F. no yes in Prob. 15

Have the requirements of Section 49 of the Rules been complied with: yes

Is this machinery duplicate of a previous case no If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been built under special survey. The materials and workmanship are sound and good. The boilers and main steam pipes were tested by hydraulic pressure and the engines and boilers examined under steam and all found satisfactory.

The machinery is in a good and safe working condition and renders the vessel eligible in my opinion to have the notations of \star L.M.C-6-20 + ^{fitted} ~~carrying~~ oil fuel ~~at~~ above 150°F in D.B. in the Register Book.

FITTED FOR OIL FUEL 6-20 F.P. ABOVE 150°F

THE RECORD. T. L. M. C. 6. 20

25/6/20

IM

Note: - The vessel is fitted with Electric Light and "Wireless"

The amount of Entry Fee	...	£	3-0-0	When applied for,
Special	...	£	39-6-0	19-6-1920
Donkey Boiler Fee	...	£	✓	When received,
Travelling Expenses (if any)	£	:	✓	22-6-1920

W^m Morrison
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

Assigned

ed
MACHINERY DEPT
MATTER

9 + 8 MC 6:20
letter for let. Incl 6:20. Above 1500

Lloyd's Register
Foundation